

GL: 4242¹

Web ID#

For fields that are not applicable, enter NA. **Optional fields have a grayed background.** Record additional information in the REMARKS section.

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Other Options

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Lower Well

Section 7: Well Test Data

Total Depth: 331
Static Water Level:
Water Temperature:

Unknown Test Method *

State	Zip Code
CA	92067

Yield _ gpm.
Pumping water level _ feet.
Time of recovery _ hours.
Recovery water level _ feet.

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Township	Range	Section	Quarter Sections
06S	24E	3	NE¼ NW¼ SW¼
County			Geocode

CARBON

Latitude	Longitude	Geomethod	Datum
Altitude	Method	UNKNOWN	Date

Addition	Block	Lot
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Section 8: Remarks

Section 9: Well Log

Drilling Method: ROTARY

Geologic Source

Date well completed: Friday, July 07, 2006

Unassigned

Borehole dimensions

From	To	Diameter
3	37	22
3	120	18
3	131	12
3	660	9

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
0	37	8	0.322		WELDED	STEEL
3	123	12	0.250		WELDED	STEEL
3	331	18	0.322		WELDED	STEEL

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
331	640	18			OPEN HOLE

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
3	123	CEMENT	
3	331	CEMENT	

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: _____

Company: ROCK CREEK DRILLING INC

License No: WWC-300

Date Completed: 7/7/2006

065 24E 10 BAB
MONTANA WELL LOG REPORT

Upper Well GL: 4321'

Form No. 603 R2-99

Well ID#

This log reports the activities of a licensed Montana well driller and serves as the official record of work done within the borehole and casing and describes the amount of water encountered. This form is to be completed by the driller and filed with DNRC within 60 days of completion of the work. Acquiring Water Rights is the well owner's responsibility and is not accomplished by the filing of this report.

Well log information is stored in the Groundwater Information Center at the Montana Bureau of Mines and Geology (Butte) and water right information is stored in the Water Rights Bureau records (Helena).

For fields that are not applicable, enter NA. Optional fields have a grayed background. Record additional information in the REMARKS section.

1. WELL OWNER:

Name Earl Shultz
Mailing address P.O. B. 2374
Rancho Santa Fe, Ca. 92067

2. WELL LOCATION

List ¼ from smallest to largest

NW ¼ NE ¼ NW ¼, Section 10
Township 6 N Range 24 E County Carbon
Lot 1 Tract/Blk 1 Subdivision Name 1
Well Address 1
GPS ☐ Yes ☐ No
Latitude 45° 20' 03" N Longitude 108° 46' 30.1" W
Error as reported by GPS locator (± feet) 12'
Horizontal datum ☐ NAD27 ☐ WGS84

3. PROPOSED USE:

☐ Domestic ☐ Stock ☐ Irrigation
☐ Public water supply ☐ Monitoring Well ☒ Other:

4. TYPE OF WORK:

☒ New well ☐ Deepen existing well ☐ Abandon existing well
Method: ☐ Cable ☒ Rotary ☐ Other:

5. WELL CONSTRUCTION DETAILS:

Borehole:

Dia. 2 3/4" in. from -4 ft. to 44 ft.
Dia. 1 7/8" in. from 44 ft. to 124 ft.
Dia. 8" in. from 124 ft. to 597 ft.

Casing: 6 1/2" Dia. 577 ft. to 935 ft.

Steel: ☐ Well thickness ☐ Threaded ☐ Welded

Dia. 1 1/2" in. from -4 ft. to 44 ft.

Dia. 1 1/2" in. from -4 ft. to 124 ft.

Dia. 8" in. from 124 ft. to 597 ft.

Plastic: ☐ Pressure Rating 2 lbs. ☐ Threaded ☐ Welded

Dia. 8" in. from 124 ft. to 597 ft.

Perforations/Slotted Pipe:

Type of perforator used 1

Size of perforations/slots 1 in. by 1 in.

no. of perforations/slots from 1 ft. to 1 ft.

no. of perforations/slots from 1 ft. to 1 ft.

Screens: ☐ Yes ☒ No

Material 1

Dia. 1 1/2" Slot size 1 from 1 ft. to 1 ft.

Dia. 1 1/2" Slot size 1 from 1 ft. to 1 ft.

Gravel Packed: ☐ Yes ☒ No

Size of gravel 1

Gravel placed from 1 ft. to 1 ft.

Packer: ☐ Yes ☒ No

Type 1 Depth(s) 1

Grout: Material used Cement

Depth from 4 ft. to 46 ft. OR ☐ Continuous feed

6. WELL TEST DATA:

A well test is required for all wells. (See details on well log report cover.)

☐ Static water level 0 ft. below top of casing or

☐ Closed-in artesian pressure 1 psi.

How was test flow measured:

bucket/stopwatch, flow flume, flowmeter, etc 2000

Yellowstone Controlled Groundwater Area - Water Temperature 1 °F

☐ AQUIFER TEST DATA FORM ATTACHED

Test - 1 hour minimum

Drawdown is the amount water level is lowered below static level. All depth measurements shall be from the top of the well casing. Time of recovery is hours/minutes since pumping stopped.

Air test*

1 gpm with drill stem set at 1 ft. for 1 hours
Time of recovery 1 hrs/min. Recovery water level 1 ft.

OR Baller test*

1 gpm with 1 ft. of drawdown after 1 hours
Time of recovery 1 hrs/min. Recovery water level 1 ft.

OR Pump test*

Depth pump set for test 1 ft.
1 gpm pump rate with 1 ft. of drawdown after 1 hrs pumping
Time of recovery 1 hrs/min. Recovery water level 1 ft.

OR Flowing Artesian*

2000 gpm for 10 hours
Flow controlled by VALVE

*During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.

7. WELL LOG:

Depth, Feet		Material:
From	To	color/rock and type/descriptor (example: blue/shale/hard, or brown/gravel/water, or brown/sand/heaving)
0	35	Gray Limestone RECEIVED
35	105	Red sandstone (55' top of Chugwater)
105	120	Red clay APR 27, 2004
120	145	Red sandstone interbedded with red clay M.B.H.G. lenses
145	170	of gray & white Gypsum
170	195	water present but not flowing
195	220	Macaron & Gray Limestone
220	245	445' top of Fray-Tanque Park Gt. Fm.
245	270	White to tan sandstone, w/ tan
270	295	white sandstone w/ gypsum lense
295	320	565' Top of Amosden Formation
320	345	white, tan & gray sandy limestone
345	370	w/ some green & tan shale lenses
370	395	Red yellow shale
395	420	Red shale
420	445	White, tan, gray, & pink sandy limestone, Flowing water
445	470	855' Top of Madison Formation
470	495	Gray Limestone, Flowing water

☐ ADDITIONAL SHEETS ATTACHED

8. DATE WELL COMPLETED: 4-9-04

Casing

9. REMARKS: All Cement from

bottom to surface

10. DRILLER/CONTRACTOR'S CERTIFICATION:

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name, firm, or corporation (print) Rock Creek Drilling

Address Box 295, Juliet Mt. 59711

Signature Wm. Kuyper

Date 4-10-04 License no. 300



Montana DNRC P.O. BOX 201601 HELENA, MT 59620-1601 444-6610

MBMG ID#

Mail To

G WIC 1300 W Park St
Mail Mail 382
Butte MT. 59701-8797

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Geology and Water Resources of the Bluewater Springs Area Carbon County, Montana

By EVERETT A. ZIMMERMAN

CONTRIBUTIONS TO THE HYDROLOGY OF THE UNITED STATES

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1779-J

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U.S. Bureau of Sport Fisheries and
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basin*

